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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,820	09/30/2003	Eran Steinberg	FN-104E-US	3065

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Tessera/FotoNation
Patent Legal Dept.
3025 Orchard Parkway
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EXAMINER	
LEE, JOHN W	
ART UNIT	PAPER NUMBER
2624	

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12/26/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/676,820	STEINBERG ET AL.	
	Examiner	Art Unit	
	JOHN Wahnkyo LEE	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 October 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) *4-6 and 11-42* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 7-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20081209*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 15 September 2008 has been entered.

Information Disclosure Statement

2. An initialed and dated copy of Applicant's IDS form 1449-Paper No. 20081209, is attached to the instant Office action.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 8, 19 and 21 of copending Application No. 10/842244 in view of Robins et al. (US 2003/0039402). Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of the applicant's application and combinations of claims 8, 19 and 21 of the instant application and Robins et al. are claiming the same subject matter with similar claim limitations using different words or terminologies as follows:

	Applicant's application		10/842244
Claim 1	A method of automatically determining a need to service a digital image acquisition system including a digital camera with a lens assembly and electronic sensor array, comprising:	Claim 19	A method performed within a digital image acquisition device including a sensor array that is coupled with a lens assembly including optical and signal coupling, the method for automatically correcting imaging artifacts within images

			acquired by the device, comprising:
	(a) determining a probability that pixels within one or more acquired digital images correspond to dust blemish artifacts;	Claim 8	wherein determining of said probabilities based on a pixel analysis of the suspected dust artifact regions in view of predetermined characteristics indicative of the presence of a dust artifact region.
	(b) generating a master dust map describing physical manifestations of dust on the electronic sensor array based on the determining;	Claim 19	(d) based on a master dust map describing a physical manifestation of dust artifacts on the sensor array, generating a manifestation of the master dust map for a

			specific lens and focal length, calculated as a transformation of the master dust map based on the extracted parameters;
	(c) calculating a transformation of the master dust map to generate a manifestation of the master dust map that includes information describing dust location and appearance as a function of one or more optical parameters including exit pupil dimension of the lens assembly or distance of dust from a surface of the electronic sensor array that corresponds to a focal plane of the lens assembly, or both;	Claim 19	(c) receiving through said signal coupling data based on a lens calibration table corresponding to said lens assembly that includes information describing artifact location and appearance as a function of one or more values of one or more extracted parameters relating to the optical system that are embedded within the

			lens assembly at least includinq exit pupil dimension of the lens assembly, or distance of dust from a surface of the electronic sensor array that corresponds to a focal plane of the lens assembly, or both; and (d) based on a master dust map describing a physical manifestation of dust artifacts on the sensor array, generating a manifestation of the master dust map for a specific lens and focal length, calculated as a transformation of the master dust map based

			on the extracted parameters; and
	(d) analyzing pixels within one or more further acquired digital images and updating the master dust map or the manifestation of said master dust map, or both, in accordance with the analyzing;	Claim 21	(ii) forming a statistical map including mapped artifact regions based on the artifact determining and associating, (iii) wherein the correcting is based on the statistical map.

	(e) determining based on the updating whether a threshold distribution of dust artifacts is present within said one or more further acquired of said digital images;	Claim 19	(e) correcting pixels corresponding to correlated artifact regions within further digitally-acquired images based on the determining and the one or more extracted parameter values.
	(e) indicating a need for service when at least said threshold distribution is determined to be present.	Robins et al .	Paragraph [0053], “the threshold for each pixel can be obtained from the properties of surrounding pixel values in a neighborhood of a pixel under consideration”

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1-3 and 7-10 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing (Reference the May 15, 2008 memorandum issued by Deputy Commissioner for Patent Examining Policy, John J. Love, titled "Clarification of 'Processes' under 35 U.S.C. 101" – publicly available at USPTO.GOV, "memorandum to examining corp"). The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. In order for a process to be "tied" to another statutory category, the structure of another statutory category should be positively recited in a step or steps significant to the basic inventive concept, and NOT just in association with statements of intended use or purpose, insignificant pre or post solution activity, or implicitly.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. First of all, claim 1 has two (e) claim limitations which make the claim unclear. Moreover, the claim limitation, "indicating ... to be present," is not clear. The examiner requires the applicant to fix this problem in order to overcome the 112 rejection.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-3, 7-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robins et al. (WO 03/019473) in view of Kitawaki et al. (US 2002/0093577).

Regarding claim 1, Robins discloses a method of automatically determining a need to service a digital image acquisition system including a digital camera with a lens assembly and electronic sensor array (Fig. 1; abstract; page 15, “digital camera”) comprising: (a) determining a probability that pixels within one or more acquired digital images correspond to blemish artifacts (Fig. 3; page 16, “… threshold … defect map …”; Fig. 9B; page 17, "Gaussian approximation ...") (b) generating a master dust map describing physical manifestitations of dust on the electronic sensor array based on the determining (Fig. 9B; page 17, "Gaussian approximation ...");(d) analyzing pixels within

one ore or more acquired digital images according to the probability determinations to determine whether a threshold distribution of blemish artifacts is present within one or more of said digital images (Fig. 9B; page 17, "Gaussian approximation ..."); (e) determining based on the updating whether a threshold distribution of dust artifacts is present within said one or more further acquired of said digital images (Fig. 9B; page 17, "Gaussian approximation ..."); (e) indicating a need for service when at least said threshold distribution is determined to be present (Figs. 10 and 12; page 15, “identifying the defects …”; page 18, “dust mark tool … defect map”). However, Robin does not disclose rest of the claim limitations. Instead of Robin, Kitawaki discloses (c) calculating a transformation of the master dust map to generate a manifestation of the master dust map that includes information describing dust location and appearance as a function of one or more optical parameters (Fig. 4; paragraphs [0035], “focal length”, “f-stop number” and “dust addresses”) including exit pupil dimension of the lens assembly or distance of dust from a surface of the electronic sensor array (paragraphs [0007] and [0008], “solid-state image sensor”; Fig. 1-4; paragraph [0032], “CCD”) that corresponds to a focal plane of the lens assembly (paragraph [0012], “magnification of the imaging lens” and “f-stop number”; Fig. 4; paragraphs [0035], “focal length”, “f-stop number”), or both; updating the master dust map or the manifestation of said master dust map, or both, in accordance with the analyzing (Fig. 3; paragraph [0036]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Kitawaki’s invention in Robins’s invention to detect and removal defects for a better quality of image as suggested by Robin (page 1).

Regarding claim 2, Robins further discloses wherein said one or more acquired images comprising one or more calibration images (Fig. 1; page 9, "… means for acquiring a digital image …").

Regarding claim 3, Robins further discloses said threshold distribution being determined based upon an analysis of the ability of an automatic blemish correction module of said digital image acquisition system to reasonably correct such blemishes within said images (pages 17-18, "… correction …").

Regarding claim 7, Robins discloses all the previous claim limitations except the one specified in claim 7. However, Kitawaki discloses wherein said one or more acquired images are acquired with specific acquisition setting comprising one or more of aperture, shutter speed, sensitivity, and subject matter (paragraph [0012], "magnification of the imaging lens" and "f-stop number"; Fig. 4; paragraphs [0035], "focal length", "f-stop number").

Regarding claim 8, Kitawaki further discloses, wherein said specific acquisition settings being automatically determined in a specific calibration mode on said digital image acquisition system (paragraph [0012], "magnification of the imaging lens" and "f-stop number"; Fig. 4; paragraphs [0035], "focal length", "f-stop number").

Regarding claim 10, Kitawaki further discloses wherein said analyzing being based on defined in relations with change of lenses (paragraph [0012], "magnification of the imaging lens" and "f-stop number"; Fig. 4; paragraphs [0035], "focal length", "f-stop number").

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robins et al. (WO 03/019473) in view of Anderson (US 6,002,436).

Regarding claim 9, Robins discloses all the previous claim limitations except the claim limitation specified in claim 9. However, Anderson discloses analyzing being based on defined time interval since last said analyzing (col. 3, lines 8-17, "timelapse sequence" and "time interval").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Anderson's invention in Robins's invention to provide a automatic timelapse capture as suggested by Anderson (col. 1, lines 56-58).

Conclusion

11. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN Wahnkyo LEE whose telephone number is (571)272-9554. The examiner can normally be reached on Monday - Friday (Alt.) 7:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jingge Wu/
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